20. Environmental Statement (*See 47 C.F.R. Section 1.1301 et seq.*)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? ☐ Yes ☒ No

Exhibit No. --

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

If No, explain briefly why not.

Proposed believed to comply with pertinent provisions of Sections 1.1305, 1.1306, and 1.1307 of FCC Rules *(see also Exhibit A of Engineering Report).*

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and have found it to be accurate and true to the best of my knowledge and belief.

Kevin T. Fisher

Name (*Typed or Printed*)

7/21/88

Date

Signature

(202) 293-7742

Telephone No. (*Include Area Code*)

Engineering Consultant

Relationship to Applicant (*e.g., Consulting Engineer*)

SMITH and POWSTENKO
Suite 600
2033 M Street, N.W.
Washington, D. C. 20036

Address (*Include ZIP Code*)

JOSEPH E. DUNNE III
COLBY M. MAY*

*ALSO ADMITTED IN VIRGINIA

MAY & DUNNE
CHARTERED
ATTORNEYS AT LAW
1156 - 15TH STREET, N.W.
SUITE 515
WASHINGTON, D.C. 20005-1704
(202) 223-9013

RICHARD G. GAY
OF COUNSEL

TELECOPIER NO.
(202) 223-6992

April 25, 1989

HAND DELIVER

Donna R. Searcy
Secretary
Federal Communications Commission
Washington, D.C. 20554

RE: National Minority TV, Inc., KTDZ-TV, Portland, Oregon, Application for a TV Microwave Studio Transmitter Link

Dear Ms. Searcy:

Filed herewith, in triplicate, on behalf of the above-referenced permittee is an application submitted on FCC Form 313 for a new TV Microwave Studio Transmitter Link to be operated on frequencies 7100-7125 MHz.

Pursuant to section 1.1104 of the Commission's rules the application fee of $75.00 is also tendered herewith.

If any questions should arise concerning this matter, kindly contact the undersigned directly.

Respectfully submitted,

NATIONAL MINORITY TV, INC.

By: _____
Colby M. May
Its Attorney

CMM:gmcB47
xc: Mrs. Jane Duff

Approved by OMB
3060-0028
Expires 10-31-86

Federal Communications Commission
Washington, D.C. 20554

APPLICATION FOR AUTHORIZATION IN THE AUXILIARY RADIO BROADCAST SERVICES

(Carefully read instructions before filling out form.)

DO NOT WRITE IN THIS BOX

File No.

1. LEGAL NAME OF APPLICANT

NATIONAL MINORITY TV, INC.

2. MAILING ADDRESS (Street) *(24 characters)*

P.O. BOX C-11949

City *(20 characters)*

Santa Ana

State: CA Zip Code: 92711

3. CALL SIGN OF ASSOCIATED BROADCAST STATIONS

AM TV KTDZ TV

Translator FM

Low Power

Community of License/Operation

City *(20 characters)* Portland State OR

4. TYPE OF STATION PROPOSED *(Check appropriate boxes)*

☐ A. Remote Pickup
☐ Base ☐ Mobile ☐ EBS ☐ Automatic Relay ☐ Inter City Relay ☐ STL

☐ B. Aural Microwave Station

☒ C. TV Microwave Station
☒ STL ☐ TV Relay ☐ Pickup ☐ Translator Relay

☐ D. Low Power Auxiliary Station

5. PURPOSE OF APPLICATION *(Check appropriate box)*

☒ A. New Station ☐ B. Reinstatement of expired license ☐ C. Modification of existing authorization

6. NATURE OF PROPOSED CHANGES N/A

☐ Change Frequency ☐ Relocate station
☐ Change Antenna System ☐ Add base station system
☐ Other *(give as Exhibit No. ____ an explanation)*

Call sign of existing station Base Number
☐ Change power ☐ Replace equipment
☐ Change number of mobiles

7. A. If this application is a Remote Pickup or Low Power Auxiliary Station System is transmitter type accepted? N/A ☐ Yes ☐ No

B. If this application is a TV Pickup, Remote Pickup, or Low Power Auxiliary Station System specify mobile number.

8. FACILITIES REQUESTED *(If more space is needed attach as Exhibit No. ____)*

RECEIVED
APR 25 1989
FCC
FEE SECTION

A. Frequency(ies) (MHz) *(Use 17 characters for each line.)*

7100 - 7125

B. Power (Watts)

Transmitter Power Output (TPO) Antenna Input Power Effective Radiated Power (ERP)

.08 .04 436.52

C. Emission 2,5,0,0,F,9

9. DETAILS OF STATION AT A FIXED LOCATION

A. Transmitter location *(44 characters)*

432 NE 74th St.

County *(20 characters)* Multnomah City *(20 characters)* Portland State OR

North Latitude 45° 31' 32" N West Longitude 122° 35' 14" W

B. Receiver Location *(44 characters)*

Barnes RD at Skyline Blvd.

County *(20 characters)* Multnomah City *(20 characters)* Portland State OR

North Latitude 45° 30' 58" N West Longitude 122° 43' 59" W

10. Give the mobile area of operation. N/A City State

A. Coordinates of the center area:

B. Radius of operation from these coordinates:
miles: km:

FCC 31
May 198

11. If any of the circumstances in instruction 11 apply attach as Exhibit Nos. N/A detailed statements.

. Supply the following antenna information *(Review instructions)*

A. Manufacturer *(20 characters)*: Cablewave | Model No.: PA6-65 | Antenna Gain: 39.90

Antenna Polarization: -V- | Beamwidth (3db or ½ power points): 1.7° | Elevation Angle: 1.8°

B. If this is a directional antenna give azimuth of main lobe. 265°

C. Overall height above ground of antenna structure. 25 ft. 7.6 meters

D. Elevation of ground above mean sea level at antenna site. 250 ft. 76 meters

E. Elevation above ground of antenna center of radiation. 22 ft. 6.7 meters

F. Antenna sketch figure _____. Passive reflector information attach as Exhibit No. _____.

13. Will an antenna be mounted on an existing antenna structure? ☐ Yes ☒ No

If Yes, give the call sign and licensee's name.

14. A. If the application is for Aural Microwave station or lower power TV pickup station specify the following:

Equipment Manufacturer *(28 characters)* | Type No. *(14 characters)* | Output Power

B. If this application is for TV Microwave station is the transmitter type accepted or was the transmitter manufactured before October 1, 1981? ☒ Yes ☐ No

Has the FAA been notified of proposed construction? *(See Part 17 of FCC Rules)* ☐ Yes ☒ No

If Yes, give date and office where notified.

Environmental Statement:

Would a grant of this application be a major action as defined by Section 1.1305 of the Commission's Rules? ☐ Yes ☒ No.

If Yes, attach as Exhibit No. _____ the required statement in accordance with Section 1.1311 of the Commission's Rules.

If No, attach as Exhibit No. 1 an explanation.

Describe briefly the primary broadcast-related purpose of the requested authorization, attach as Exhibit No. 2.

18. For television auxiliary stations, state the anticipated percentage of time for which the station will be used for secondary uses. 0 %

(Secondary uses are transmissions of material at times when the station is not being used to transmit program material to its associated broadcast station.)

For television auxiliary licensees, attach as Exhibit No. 3, a list of the total number of existing auxiliary authorizations and indicate the combined percentage of time for which these stations are presently used for secondary uses.

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, countants, engineers, and application examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated r hearing. If all the information requested is not provided, the application may be returned without action having been taken upon it or its processing may be layed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain authority.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974. P.L. 95-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3) AND THE PAPERWORK EDUCTION ACT OF 1980 P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

THE APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United ates because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. THE APPLI-NT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any application with which it may be in conflict. THE APPLICANT acknowledges that all statements made in this application and attached exhibits are considered material representations, and that all the exhibits are a material part hereof and are incorporated herein as if set out in full in the application.

CERTIFICATION

I certify that the statements in the application are true, completed, and correct to the best of my knowledge and belief and are made in good faith.

(DO NOT SIGN UNTIL ALL EXHIBITS HAVE BEEN PREPARED AND ATTACHED)

gned and dated this 18 day of April 19 89

Signature: Jane Duff

Jane Duff

Name Typed

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U.S. CODE, TITLE 18, SECTION 1001

For further information FCC should contact:

Name: W. Ben Miller

Telephone No.: 714-665-2145

(Check one box for appropriate classification):

- ☐ Individual Applicant
- ☐ Officer and Member of Corporation
- ☐ Member of Partnership
- ☐ Official of Government Agency
- ☑ Officer of Corporation

EXHIBIT ONE

A grant of this application would not be a major action as defined by Section 1.1305 of the Commission's Rules as it does not exceed 300 feet above ground level in height.

SUBMITTED BY: W. Ben Miller

W. Ben Miller
Engineering Consultant
National Minority TV, Inc.

EXHIBIT TWO

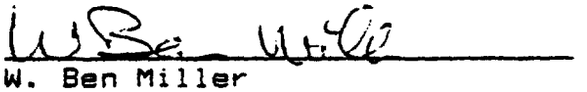
The primary broadcast related purpose of the requested authorization is to relay programming from the studio to the transmitter site.

SUBMITTED BY: W. Ben Miller

W. Ben Miller
Engineering Consultant
National Minority TV, Inc.

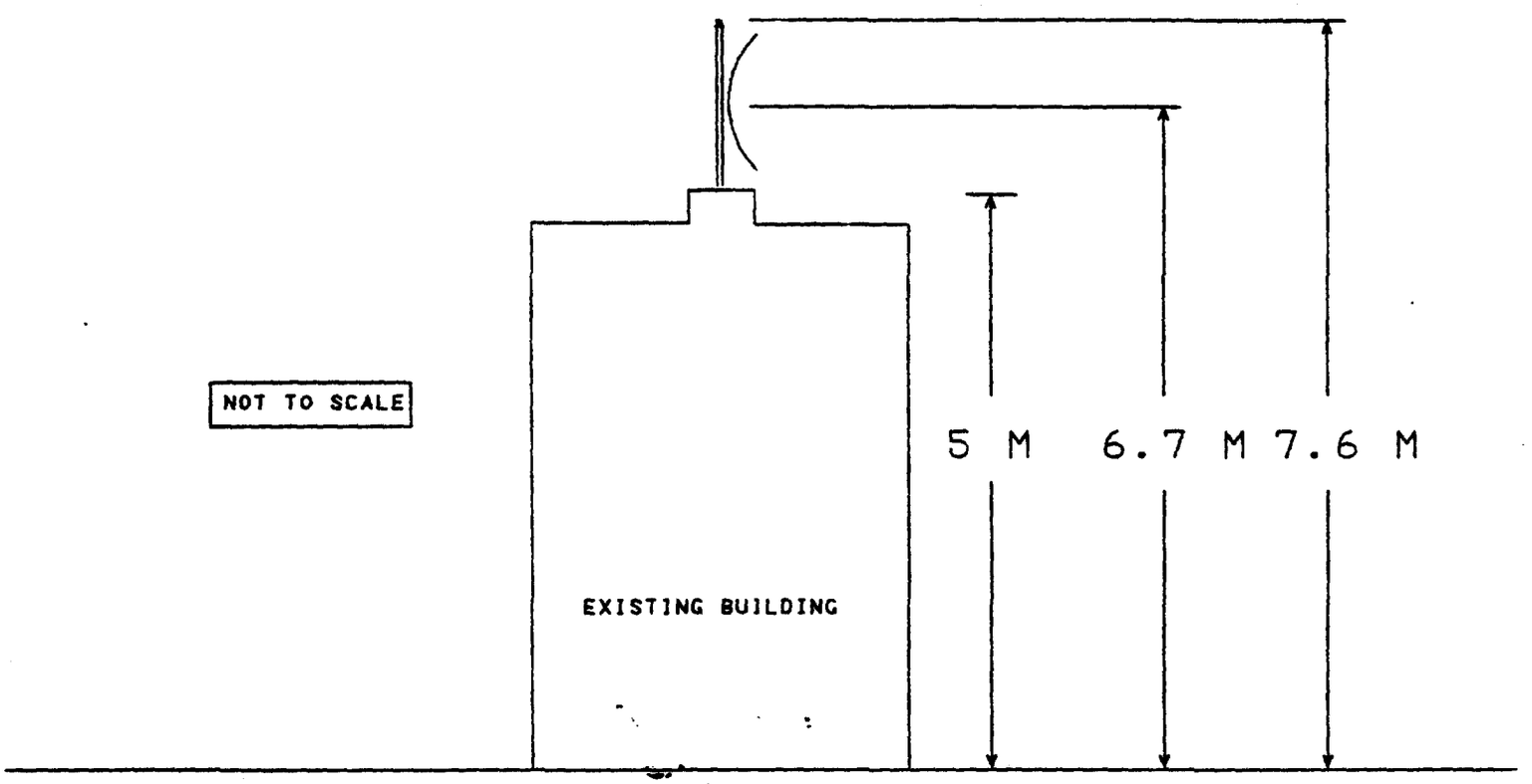
EXHIBIT THREE

KTDZ has no existing auxiliary authorizations.

SUBMITTED BY: 

W. Ben Miller
Engineering Consultant
National Minority TV, Inc.

EXHIBIT 4



NATIONAL MINORITY TV, INC.
PROPOSED TELEVISION AUXILIARY TRANSMITTER LOCATION
432 NE 74TH ST., PORTLAND, OR.

MAY AND DUNNE
ESCROW ACCOUNT
(202) 466-6220
1156 - 15TH STREET, N.W., SUITE 515
WASHINGTON, D.C. 20005

No. 312

15-7011
2540 12

NATIONAL PERMANENT BANK
WASHINGTON, D.C. 20006

April 25 19 89

PAY SEVENTY-FIVE AND 00/100---------- DOLLARS $ 75.00

TO THE ORDER OF FEDERAL COMMUNICATIONS COMMISSION

⑈00000312⑈ ⑆254070116⑆ ⑈6018 3713⑈

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW. IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

MAY AND DUNNE
ESCROW ACCOUNT

DATE	DESCRIPTION	AMOUNT
4/25/89	Filing fee for STL Application (FCC FOrm 313) for KTDZ-TV, Portland, Oregon, National Minority TV, Inc. (B47)	$75.00

NMTV/Portland, OR. # 2

JOSEPH E. DUNNE III
COLBY M. MAY*

*ALSO ADMITTED IN VIRGINIA

MAY & DUNNE
CHARTERED
ATTORNEYS AT LAW
1000 THOMAS JEFFERSON STREET, N.W.
SUITE 520
WASHINGTON, D.C. 20007
(202) 298-6345

RICHARD G. GAY
OF COUNSEL

TELECOPIER NO.
(202) 298-6375

December 5, 1989

RECEIVED HAND DELIVER

89120

FCC
FREE SECTION

Donna R. Searcy
Secretary
Federal Communications Commission
Washington, D.C. 20554

RE: KTDZ(TV), Portland, Oregon, Submission of License Application (BMPCT-880725KE)

Dear Ms. Searcy:

Filed herewith, in triplicate, on behalf of National Minority TV, Inc., licensee of KTDZ(TV), Portland, Oregon, is its license application (FCC Form 302) covering the referenced construction permit. KTDZ has been operating pursuant to the automatic program test provisions of Rule 73.1620 since November 16, 1989.

Please note that a check in the amount of $150.00 is enclosed to cover the requisite filing fee.

If any questions should arise concerning this matter, kindly contact the undersigned directly.

Respectfully submitted,

NATIONAL MINORITY TV, INC.

By: _____
Colby M. May
Its Attorney

CMM:gmcB47
xc: KTDZ(TV) Public File

Washington, D.C. 20554

APPLICATION FOR NEW BROADCAST STATION LICENSE
Carefully read instructions before filling out( )
RETURN ONLY FORM TO FCC

3060-0029
Expires 9/30/90

For Commission Fee Use Only	FEE NO:	For Applicant Fee Use Only
	FEE TYPE:	Is a fee submitted with this application? [X] Yes [ ] No
	FEE AMT:	If No, indicate reason therefor (check one box): [ ] Nonfeeable application
	ID SEQ:	Fee Exempt (See 47 C.F.R. Section 1.1112) [ ] Noncommercial educational licensee [ ] Governmental entity

SECTION I – GENERAL DATA

For Commission Use Only
File No.

Legal Name of Applicant	Mailing Address		
National Minority TV, Inc.	P. O. Box C11951		
	City: Santa Ana	State: CA	Zip Code: 92711
	Telephone No. (include area code): (714) 665-2113		

1. Facilities authorized by construction permit

This application is for: [ ] Commercial [ ] Noncommercial

[ ] AM Directional [ ] AM Non-Directional [ ] FM Directional [ ] FM Non-Directional [X] TV

Call Letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
KTDZ	Portland	BAPCT-871218KG	BMPCT-880725KE	12/19/89

2. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620? [X] Yes [ ] No

If No, explain.

3. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met? [X] Yes [ ] No

If No, state exceptions.

4. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect? [ ] Yes [X] No

If Yes, explain.

5. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)? [X] Yes [ ] No [ ] Does not apply

If No, explain.

FCC
June

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in the application.

CERTIFICATION

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant	Signature
National Minority TV, Inc.	Joan Duffy
Title: Vice President	Date: December 4, 1989

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U.S. CODE, TITLE 18, SECTION 1001.

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, engineers, and applications examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information requested is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested authorization.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION II-C License Application Engineering Data - Broadcast

Name of Applicant

NATIONAL MINORITY TV, INC.

1. Facilities authorized in construction permit

Call Sign	Channel No.	File No. of Construction Permit	Frequency Band	Carrier Frequency
KTDZ-TV	24 +	BAPCT-871218 KH	530-536 MHz	Visual 531.26 MHz Aural 535.76 MHz

Maximum Effective Radiated Power (visual)	Antenna height above average terrain
in dBk: 34.3 in kW: 2690	463 Meters

2. Station location (principal community)

State	City or Town
OREGON	PORTLAND

3. Transmitter location

State	County	City or Town	Street Address (or other identification)
OREGON	MULTNOMAH	PORTLAND	5516 SW Barnes Road

4. Main Studio location

State	County	City or Town	Number and Street
OREGON	MULTNOMAH	PORTLAND	432 NE 74th Street

5. Operating constants - Visual transmitter (peak)

Transmitter power output (after vestigal sideband filter, if used, and after multiplexer, if combined)	Multiplexer loss in dB, if separate	Input to transmission line
17.78 dBk 60 kW	Included dB	17.78 dBk

Transmission line power loss	Antenna input power	Maximum antenna power gain	Maximum effective radiated power
0.96 dB	16.82 dBk	17.51 dB	34.3 dBk 2690 kW

Does the transmitter comply with 47 C.F.R. Section 73.1660? [X] YES [ ] NO

If No, describe fully in Exhibit No. _____.

6. Antenna, Transmission Line and Multiplexer

Antenna make and type No.	Maximum power gain	Average (RMS) horizontal plane power gain
Andrew ATW30H3-HSC-24	17.51 dB	12.16 dB

Elevation of the top of antenna supporting structure above ground (including antenna and all other appurtenances and lighting, if any)	Height of antenna radiation center above ground	Height of antenna radiation center above mean sea level
303 Meters	231 Meters	553 Meters

Geographical Coordinates of antenna

North Latitude 45 ° 30 ' 58 " West Longitude 122 ° 43 ' 59 "

Is a directional antenna used? [X] YES [ ] NO

Is electrical or mechanical beam tilting employed? [X] YES [ ] NO

If either a directional antenna or one employing beam tilt is used, and the radiation patterns differ from those on file with the construction permit application, give full details in Exhibit No. N/A.

Transmission Line

Make	Type No.	Coaxial or waveguide
ANDREW	WR 1800 ACX 675	WAVEGUIDE COAXIAL

Size (nominal inside transverse dimensions)	Length	Power loss for this length
WAVEGUIDE - 46 x 23 COAXIAL - 15.5 centimeters	WAVEGUIDE-30 COAXIAL- 229 Meters	WAVEGUIDE-.050 COAXIAL-0.91 dB

Multiplexer

Make	Type No.	Loss (if not included in transmitter power output)
MICRO COMMUNICATIONS	#48009	Visual INC. dB Aural INC. dB

7. Frequency measurements

Measured visual carrier frequency (specify at least to nearest 100 Hz) 531,260,000 Hz

Measured aural carrier center frequency (specify at least to nearest 100 Hz) 535,759,990 Hz

Give date measurements made and method used or frequency measurement service employed.

Measurements taken 6 November 1989 using Hewlett Packard Model 5351A Serial #2536A17828.

8. Performance Data

Have equipment performance measurements been taken in accordance with 47 C.F.R. Section 73.1590, demonstrating compliance with the Commission's transmission standards and transmission system requirements, and are those measurements available for submission to the Commission upon request? [X] YES [ ] NO

If No, explain.

9. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit? THE APPARATUS CONSTRUCTED DOES NOT DIFFER FROM THAT DESCRIBED IN THE APPLICATION FOR CONSTRUCTION PERMIT IN ANY SIGNIFICANT WAY.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name *(Please Print or Type)*	Signature *(Check appropriate box below)*
W. BEN MILLER	W Ben Miller
Address *(Include ZIP Code)* P.O. BOX C-11949 SANTA ANA, CA 92711	Date November 7, 1989
	Telephone No. *(Include Area Code)* (714) 665-2145

[ ] Technical Director
[ ] Chief Operator
[ ] Other *(specify)*
[ ] Registered Professional Engineer
[X] Technical Consultant

McCLANATHAN and ASSOCIATES, INC.
CONSULTING ENGINEERS
P.O. BOX 750 - PORTLAND, OREGON 97207
(503) 246-8080

ENGINEERING REPORT

concerning

NATIONAL MINORITY TV, INC.

TELEVISION STATION CONSTRUCTION PERMIT
F.C.C. FILE NO. BMPCT-880725KE, KTDZ-TV
Channel 24, Portland, Oregon

REQUIRED CONDITIONS FOR MEASUREMENT OF AM RADIO STATION KYTE DIRECTIONAL ANTENNA FIELD STRENGTH PRIOR TO COMMENCING PROGRAM TESTS.

November 1989

McCLANATHAN and ASSOCIATES, INC.
CONSULTING ENGINEERS
P.O. BOX 750 - PORTLAND, OREGON 97207
(503) 246-8080

ENGINEERING REPORT

concerning

NATIONAL MINORITY TV, INC.

McClanathan and Associates, Inc., Professional Electrical Engineers, has been retained by National Minority TV, Inc., permittee for a construction permit to build a new commercial TV broadcast station KTDZ-TV on Channel 24 in Portland, Oregon, FCC File No. BMPCT-880725KE.

The transmitting antenna for KTDZ-TV is located on an existing tower near the directional antenna system for AM Radio Station KYTE operating on 970 kHz. A condition of the KTDZ-TV construction permit is that a partial antenna proof of performance will be made for the KYTE antenna system, both prior to and after erection of the KTDZ-TV antenna equipment. This report and data describes the results of these measurements.

The KTDZ-TV transmitting and STL receiving antennas are mounted on the existing KOIN-TV Ch. 6 television tower in Portland. The KOIN-TV tower is a guyed structure with an overall height above ground of 300 meters and is in the immediate vicinity of the KYTE directional antenna system. To support the additional Ch. 24 TV antennas, significant structural changes to the KOIN-TV tower had to be completed.

Prior to commencing such changes, a partial antenna proof of performance, as described in 47 CFR 73.154(a), was initiated and completed on June 23, 1989. Measurements of the field strength for the KYTE directional antenna pattern were made at ten or more points on each of the ten radials included in the last complete antenna proof of performance dated August 1972. The original 7.5 minute USGS topographic maps used for the 1972 proof measurements were obtained from KYTE to facilitate locating the measurement points. Efforts were made to make the present measurements in the exact same location as the original measurements. The staff of KYTE cooperated fully in permitting KYTE to operate during daytime hours with the nighttime antenna pattern to facilitate the completion of taking the measurements.

Structural changes to the KOIN-TV tower were initiated on June 24, 1989. This work included the addition of three additional guy levels and concrete anchors to the existing three

guy levels. Structural changes were also made to the tower itself. The KTDZ-TV Ch. 24 antenna, Andrew Type ATW30H3-HSC-24, is side mounted at approximately 231 meters AGL.

Installed on the KOIN-TV tower are three, vertical detuning skirt systems to minimize any effect on the KYTE AM radiation pattern. After the KOIN-TV tower modifications and installation of all KTDZ-TV antennas were completed the three detuning systems on the tower were properly adjusted for minimum effect to the KYTE antenna pattern. This work was completed on October 7, 1989.

On October 14, 1989 another partial antenna proof of performance was completed for the KYTE directional antenna pattern. Measurements taken on the ten radials from KYTE and at the identical locations as the original points measured before construction. During both sets of measurements, Radio Station KYTE maintained their directional antenna system operating parameters in accordance with the KYTE instrument of authorization. No change was noted in the operating parameters after installation of the Ch. 24 TV antenna equipment and detuning of the KOIN-TV tower.

Field strength measurements were made concurrently by two field crews of two persons each. The undersigned engineer operated one field strength meter and Frank R. Baker, a staff technician with McClanathan and Associates, operated the other instrument. Both field strength meter instruments, Potomac Instruments Type FIM-41 and FIM-21, were compared with each other by each operator prior to and after making the measurements and the readings of the two instruments were within one percent of each other on all scales used. The Potomac Instruments calibration charts and dates for both instruments are attached.

The initial set of field strength measurements were made on June 23, 1989 prior to commencing work on the KOIN-TV tower. The final measurements were made on October 14, 1989 after completion of all tower and antenna installation work. The average ratio of the measurements are summarized as follows.

RADIAL Degree	6-23-89 / 1972 Average Ratio	10-14-89 / 1972 Average Ratio	6-23-89 / 10-14-89 Average Ratio
38	0.88	0.90	1.031
78	0.85	0.88	1.043
118	0.72	0.75	1.048
163	0.78	0.82	1.044
193	0.87	0.90	1.041
224	0.77	0.79	1.026

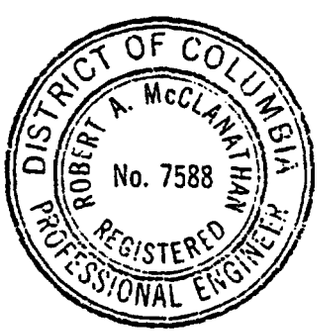
RADIAL Degree	6-23-89 / 1972 Average Ratio	10-14-89 / 1972 Average Ratio	6-23-89 / 10-14-89 Average Ratio
258	0.78	0.81	1.043
292	0.67	0.70	1.047
323	0.60	0.63	1.044
351	0.76	0.77	1.033

Average ratio of 10-14-89 to 6-23-89 = 1.040

The above summary of the attached field strength measurement data shows that the average change of field strengths for the ten radials after changes to the tower and installation of the TV antenna equipment was 1.040 times the original measurements made on June 23, 1989. This increase is quite uniform over all ten radial directions from KYTE and is within the normal operating power limitation for KYTE.

The measurements described in this report demonstrate that the structural changes to the KOIN-TV tower and installation of the KTDZ-TV antenna equipment, after readjustment of the KOIN-TV tower detuning system, has not caused any change to the directional antenna system for KYTE.

Respectfully submitted,



Robert A. McClanathan, P.E.
McClanathan and Associates, Inc.
Professional Electrical Engineers

November 6, 1989

KYTE POINT	38 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
14	1.31	215	946	180	0.84	1043	195	0.91	1.08
15									
16	1.87	113	955	100	0.88	1050	103	0.91	1.03
17	2.30	110	1000	87	0.79	1055	90	0.82	1.03
18	3.73	54	1011	51	0.94	1104	52	0.96	1.02
19	4.66	29	1019	30	1.03	1110	30	1.03	1.00
20	5.77	26.5	1029	22.9	0.86	1117	24	0.91	1.05
21	6.50	25.2	1036	19.3	0.77	1122	20.5	0.81	1.06
22	7.46	17	1041	17.8	1.05	1126	18	1.06	1.01
23	9.00	15.5	1055	12.6	0.81	1138	12.5	0.81	0.99
24A	10.50	10	1110	7.8	0.78	1147	8	0.80	1.03
	AVERAGE				0.88			0.90	1.031

KYTE POINT	78 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
9	1.30	82	1356	77	0.94	1030	68	0.83	0.88
10MP	1.35	115	1354	88	0.77	1027	93	0.81	1.06
11	1.50	120	1350	96	0.80	1033	93	0.78	0.97
12	1.56	82	1345	79	0.96	1035	85	1.04	1.08
13	1.89	45	1250	42.5	0.94	1313	42	0.93	0.99
14	2.25	61	1245	51.5	0.84	1307	56	0.92	1.09
15	2.73	33.5	1240	33	0.99	1252	36.5	1.09	1.11
16	2.93	32	1237	32.5	1.02	1257	33	1.03	1.02
17	3.15	32.7	1230	27.9	0.85	1300	30	0.92	1.08
18	3.86	23.3	1223	16.4	0.70	1245	17.9	0.77	1.09
19A	4.30	19.7	1219	14.7	0.75	1240	15.5	0.79	1.05
20	4.74	14.5	1211	13.7	0.94	1237	14.6	1.01	1.07
21	5.25	12.7	1206	8.8	0.69	1232	9.4	0.74	1.07
22	6.34	10	1157	7.7	0.77	1225	8	0.80	1.04
23	7.13	9.5	1152	6.4	0.67	1221	6.8	0.72	1.06
24	8.2	5.2	1145	4.3	0.83	1215	4.5	0.87	1.05
25	9.7	4.3	1135	3.9	0.91	1208	4.1	0.95	1.05
	AVERAGE				0.85			0.88	1.043

KYTE POINT	118 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
8	0.84	325	1406	277	0.85	1337	270	0.83	0.97
9	0.94	290	1410	240	0.83	1333	248	0.86	1.03
10	1.50	223	913	185	0.83	1008	198	0.89	1.07
11	1.65	172	900	159	0.92	1011	162	0.94	1.02
12	2.00	135	908	109	0.81	1016	118	0.87	1.08
13	2.45	112	850	57	0.51	944	61	0.54	1.07
14	3.12	73.5	840	51	0.69	935	52	0.71	1.02
15A	4.76	21.3	828	14.5	0.68	927	16	0.75	1.10
16	5.40	25.3	821	16.2	0.64	921	18.8	0.74	1.16
17	6.07	27.5	814	15.2	0.55	915	16	0.58	1.05
18	6.78	19	808	12.3	0.65	907	13.2	0.69	1.07
19	7.90	12.5	801	7	0.56	902	6.6	0.53	0.94
20	9.37	15	753	10.8	0.72	845	11	0.73	1.02
21	10.00	11.3	748	9.5	0.84	840	10	0.88	1.05
	AVERAGE				0.72			0.75	1.048

KYTE POINT	163 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
13	1.66	323	1725	293	0.91	1603	315	0.98	1.08
14	1.95	233	1720	182	0.78	1558	200	0.86	1.10
15	2.48	203	1714	148	0.73	1554	160	0.79	1.08
16	2.63	180	1710	151	0.84	1550	162	0.90	1.07
17	3.40	150	1701	122	0.81	1546	132	0.88	1.08
18	3.87	130	1655	105	0.81	1541	112	0.86	1.07
19	4.60	114	1648	80	0.70	1535	78	0.68	0.98
20	5.45	76	1642	56	0.74	1530	61	0.80	1.09
21	6.07	68	1636	44	0.65	1524	43	0.63	0.98
22	6.62	47	1630	39	0.83	1519	40	0.85	1.03
23	8.30	38	1615	31	0.82	1509	29	0.76	0.94
	AVERAGE				0.78			0.82	1.044

KYTE POINT	193 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
10	1.25	470	1425	470	1.00	1348	458	0.97	0.97
11	1.50	405	1431	350	0.86	1352	380	0.94	1.09
12	1.80	245	1437	223	0.91	1355	230	0.94	1.03
13	2.34	243	1445	211	0.87	1402	230	0.95	1.09
14	2.68	240	1450	198	0.83	1405	205	0.85	1.04
15	3.02	198	1454	153	0.77	1407	170	0.86	1.11
16	3.78	155	1458	117	0.75	1411	125	0.81	1.07
17									
18	4.33	112	1505	95	0.85	1417	97	0.87	1.02
19	4.86	108	1510	105	0.97	1420	105	0.97	1.00
20	6.16	80	1526	63	0.79	1427	67	0.84	1.06
21	7.05	55	1533	50	0.91	1433	52	0.95	1.04
22	7.88	52.5	1538	48	0.91	1438	46.5	0.89	0.97
23	9.04	38	1547	33	0.87				
	AVERAGE				0.87			0.90	1.041

KYTE POINT	224 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
8	0.88	590	1537	540	0.92	1508	555	0.94	1.03
9									
10									
11									
12	1.72	310	1530	260	0.84	1504	267	0.86	1.03
13	2.00	330	1523	258	0.78	1501	260	0.79	1.01
14	2.52	232	1517	137	0.59	1454	147	0.63	1.07
15	3.07	195	1513	144	0.74	1450	151	0.77	1.05
16	3.80	145	1506	113	0.78	1445	122	0.84	1.08
17	4.80	125	1501	93	0.74	1437	96	0.77	1.03
18	6.23	105	1455	70	0.67	1431	68	0.65	0.97
19	7.58	80							
20	8.52	52.5	1446	48.5	0.92	1422	46	0.88	0.95
21	10.10	35.3	1440	26.7	0.76	1415	27.8	0.79	1.04
	AVERAGE				0.77			0.79	1.026

KYTE POINT	258 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
11	1.68	245	1331	175	0.71	1135	177	0.72	1.01
12	2.38	160	1335	116	0.73	1252	126	0.79	1.09
13	2.84	114	1337	91	0.80	1255	94	0.82	1.03
14	3.10	112	1339	97	0.87	1257	98	0.88	1.01
15	3.57	108	1343	93	0.86	1300	82	0.76	0.88
16	4.18	96	1347	72	0.75	1304	79	0.82	1.10
17A	4.58	82	1350	68	0.83	1306	73	0.89	1.07
18	5.96	46.5	1357	34	0.73	1321	37	0.80	1.09
19	6.74	43.5	1402	32.5	0.75	1325	35	0.80	1.08
20	7.83	37	1407	26.6	0.72	1335	28.3	0.76	1.06
21	8.94	34	1413	27	0.79	1342	28.2	0.83	1.04
22	10.80	25.5	1423	19.6	0.77	1354	20.5	0.80	1.05
	AVERAGE				0.78			0.81	1.043

KYTE POINT	292 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
6A	1.24	265	1301	246	0.93	1245	268	1.01	1.09
7	1.97	140	1258	81	0.58	1242	83	0.59	1.02
8	2.09	180	1255	118	0.66	1240	120	0.67	1.02
9	2.33	150	1253	75	0.50	1238	75	0.50	1.00
10	2.82	128	1249	86	0.67	1231	87	0.68	1.01
11	3.13	80	1248	51.5	0.64	1228	51	0.64	0.99
12	3.77	90	1242	64	0.71	1222	66	0.73	1.03
13	4.78	67	1232	45	0.67	1213	47	0.70	1.04
14	5.73	49	1228	34	0.69	1208	37	0.76	1.09
15	7.06	45	1224	29.5	0.66	1202	31.5	0.70	1.07
16	8.60	38	1218	25.7	0.68	1154	27.2	0.72	1.06
17	10.10	33	1214	20	0.61	1149	22.7	0.69	1.14
	AVERAGE				0.67			0.70	1.047

KYTE POINT	323 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
10	1.48	265	950	184	0.69	1057	190	0.72	1.03
11									
12	1.72	260	1012	148	0.57	1050	147	0.57	0.99
13	1.83	323	1014	225	0.70	1052	227	0.70	1.01
14A	1.97	224	1016	146	0.65	1053	152	0.68	1.04
15	2.15	212	1018	120	0.57	1044	128	0.60	1.07
16	2.35	170	1020	116	0.68	1042	126	0.74	1.09
17	2.72	153	1041	96	0.63	1031	103	0.67	1.07
18	3.08	125	1044	71	0.57	1028	75	0.60	1.06
19	3.54	105	1047	57	0.54	1025	61	0.58	1.07
20	4.67	55	1051	26.5	0.48	1022	28	0.51	1.06
21	5.03	40	1053	22.7	0.57	1020	23.5	0.59	1.04
22	5.92	28.7	1100	16	0.56	1016	16.2	0.56	1.01
	AVERAGE				0.60			0.63	1.044

KYTE POINT	351 RADIAL MILES	1 mV/m 1972	TIME PDT	2 mV/m 6-23-89	RATIO 2/1	TIME PDT	3 mV/m 10-14-89	RATIO 3/1	RATIO 3/2
6	0.44	1450	942	1135	0.78	1129	1160	0.80	1.02
7	1.05	270	957	246	0.91	1100	250	0.93	1.02
8	1.57	160	954	119	0.74	1112	126	0.79	1.06
9	1.75	227	1001	97	0.43	1105	101	0.44	1.04
10	1.83	202	1007	112	0.55	1106	123	0.61	1.10
11A	1.98	140	1005	92	0.66	1107	96	0.69	1.04
12	3.26	35	1111	19.1	0.55	956	21	0.60	1.10
13	3.82	34	1117	19	0.56	959	20	0.59	1.05
14	5.05	27	1121	16.6	0.61	947	16.8	0.62	1.01
15	5.90	22	1127	16	0.73	943	16.4	0.75	1.03
16	6.58	14.2	1133	12	0.85	922	11.5	0.81	0.96
17A	10.20	6.6	1141	11.2	1.70	931	10.9	1.65	0.97
	AVERAGE				0.76			0.77	1.033

NOTE: POINTS LABELED "A" HAVE BEEN RELOCATED SLIGHTLY TO MINIMIZE EFFECTS DUE TO CONSTRUCTION CHANGES AT OR NEAR THE POINT.

POTOMAC INSTRUMENTS, INC.

SILVER SPRING, MARYLAND

CERTIFICATE OF CALIBRATION

Field Intensity Meter Type FIM-21 Serial No. 488

This instrument was calibrated in an induction field of 220.0 millivolts per meter. At each measurement frequency the measured field was recorded and a correction factor K was computed: the indicated field must be multiplied by K to obtain the true field.

For some instruments a second factor K_{10} is given for use only with measurements made on the 10 volts-per-meter full scale range. K_{10} is supplied only when applicable.

KHz	K	MHz	K	KHz	K	MHz	K
540	1.000			1100	1.000		
600	1.000			1200	1.000		
700	1.000			1300	1.000		
800	1.000			1400	1.000		
900	1.000			1500	1.000		
1000	1.000			1600	1.000		

Single frequency of KHz only, K

The calibrating field is maintained equal to the National Bureau of Standards standard field within an accuracy of 1.0 per cent. NBS states that the absolute accuracy of its field is "believed to be within 3.0 per cent".

The error at points on the meter scale other than the calibration point is less than 3.0 per cent. The attenuator ratios are correct within 2.0 per cent. These accuracies apply for battery voltages that are indicated by the instrument's battery check circuit to be useable.

NEXT RECOMMENDED CALIBRATION DATE March 1988

Calibrated by Lynn D. Catino Date March 11, 1986

STATE OF MARYLAND

Personally appeared before me this 11th day of March 19 86,

Lynn D. Catino, who testified under oath that the above calibration was made either by himself or under his direction and that the statements in the above certificate are true to the best of his knowledge and belief.

Robert A. Ellenbergen

Notary Public

POTOMAC INSTRUMENTS, INC.

SILVER SPRING, MARYLAND

CERTIFICATE OF CALIBRATION

Field Intensity Meter Type FIM-41 Serial No. 140

This instrument was calibrated in an induction field of 220.0 millivolts per meter. At each measurement frequency the measured field was recorded and a correction factor K was computed: the indicated field must be multiplied by K to obtain the true field.

For some instruments a second factor K_{10} is given for use only with measurements made on the 10 volts-per-meter full scale range. K_{10} is supplied only when applicable.

KHz	K	MHz	K	KHz	K	MHz	K
540	1.000	1.6	1.000	1100	1.000	3.5	1.000
600	1.000	1.9	1.000	1200	1.000	3.8	1.000
700	1.000	2.2	1.000	1300	1.000	4.1	1.000
800	1.000	2.5	1.000	1400	1.000	4.4	1.000
900	1.000	2.8	1.000	1500	1.000	4.7	1.000
1000	1.000	3.2	1.000	1600	1.000	5.0	1.000

Single frequency of KHz only, K

The calibrating field is maintained equal to the National Bureau of Standards standard field within an accuracy of 1.0 per cent. NBS states that the absolute accuracy of its field is "believed to be within 3.0 per cent".

The error at points on the meter scale other than the calibration point is less than 3.0 per cent. The attenuator ratios are correct within 2.0 per cent. These accuracies apply for battery voltages that are indicated by the instrument's battery check circuit to be useable.

NEXT RECOMMENDED CALIBRATION DATE October 1982

Calibrated by Lynn D. Catino Date Oct. 15, 1980

STATE OF MARYLAND

Personally appeared before me this 15th day of October 1980.

Lynn D. Catino, who testified under oath that the above calibration was made either by himself or under his direction and that the statements in the above certificate are true to the best of his knowledge and belief.

Robert H. Ellenberger
Notary Public